

Leaders in Mathematical Thinking

Marian Small - Math Anxiety

>> We live in a culture where many, many, many, many elementary school teachers are still nervous about math. They actually openly talk about their nervousness. I guess, in some way, it's good that they're honest about it, but in some way, it's sad. Until they get over it, it's going to affect their behaviour as a teacher; whether it's subtle or it's overt, it is. So there are some overts. There are teachers who actually say to kids that they find math hard. I don't particularly think that's helpful for a kid to hear that from their adult teacher. Some of them are working to get over it, which is a great thing to do. But if they're still feeling it, it comes out in subtle ways. So I think that somehow we have to find ways to relax a little, assume it's doable, and kind of do it. And I think that we have too many teachers who are so concerned about how they look to kids that they won't let themselves take those risks. So risk taking is a critical piece of learning for teachers and kids. Mind-set is, for a kid, is influenced by their parents, and teachers have little control on that. So if a kid comes to school and his mother or father has already said, like, "I wasn't any good in math," it's really hard work for a teacher to undo that, because a kid is saying to himself or herself, "Well, they said it's hard, so it's hard." So we can't control the parenting. We can try, but we really can't. So all you have to control as a teacher is your own behaviour. So I think that kids won't have a positive mind-set unless you do; unless they see you messing things up and not getting agitated and just fixing it. So if a teacher tries to be perfect all the time, she can't say that she has a growth mind-set for kids. It's not going to play. A kid has to see you mess up, and not fall apart, before they really, really believe it's okay to mess up and not fall apart. So I think I've actually articulated, I think, before that it's not student mind-set I'm actually worried about, it's teacher mind-set, because that's what you have any control of influencing, student mind-set. And I really think it's about words, I think it's about behaviour. You can't just say to kids, you know, "I believe in you," you have to show them you believe in them. This is all visible in your face, it's visible in your demeanour, it's visible in how you react to things. So I think that there aren't -- putting posters on the wall is lovely, but it doesn't accomplish much. What accomplishes much is for kids really seeing you believe in them. Over the years, I have tons and tons of young men and women who have come to teacher's college nervous about math. They have degrees in sociology or psychology, or whatever it is. They avoided math almost like the plague, and now they have to take math courses to become an elementary teacher. They exhibit their nervousness. It's been so many of them who've actually said, "Oh, is that all that is? Oh, okay." And so you actually can visually watch someone turn it around. I've had many lovely opportunities over the years for people who walk up and say, "You know, I love teaching math now. I used to hate it, I love it." So I know we're making progress. It's slow. The teaching force is a big force, and change happens slowly.